The Complete User Guide to

MacGAMUT 2000

for Mac and Windows

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For a Quick Start

If you just want to get started quickly with MacGAMUT, you really don't need to look at this **User Guide** now. If you are a new MacGAMUT user, you'll want to start by reading **Registration Info** on your MacGAMUT CD. If you're a ***MacGAMUT 3.8***x user who is upgrading to ***MacGAMUT 2000***, start by reading the **MG38 Upgrade Info**. You'll find everything you need to know to get started using MacGAMUT software in the **Read Me First** file on your MacGAMUT CD. Start by reading that quick-start guide. It has all the basic info you need about how to use MacGAMUT. And it will point you to specific sections of this **User Guide** you might want to look at if you have any problems figuring out how something works.

Introduction

Note: Throughout this **User Guide**, when it is necessary to describe differences among the program components, *Intervals, Scales, and Chords* will be referred to simply as ISC. Similarly, *Melodic Dictation* will be referred to as MD, and *Harmonic Dictation* will be referred to as HD. If no program component is specifically identified, you may assume that the information applies equally to all MacGAMUT components. Also, most of the **User Guide** information is the same for both the Mac and the Windows versions, but watch for the occasional *[Mac only]* or *[Windows only]* designations.

MacGAMUT 2000 includes several different kinds of drills and exercises. *Intervals, Scales, and Chords* (ISC) provides aural-training drill and practice in the musical relationships of pitches, emphasizing both aural identification and notation skills. *Melodic Dictation* (MD) offers unlimited opportunity for developing the ability to perceive and notate melodies, from the simplest to the most complex. *Harmonic Dictation* (HD) provides unlimited practice in identifying and notating chorale-style progressions of four-voice chords. In addition, ISC Written Drill and Keyboard Drill provide for extra drill and practice in notating and playing Intervals, Scales, and Chords. The software was originally designed for use as part of the required coursework in university-level music courses devoted to developing aural skills. Given the no-nonsense pedagogical design of the software and the many options which permit instructors to adapt the program to the requirements of any course or curriculum, students enrolled in aural-training courses will probably continue to be the largest group of users. But, whether enrolled in formal music courses or not, any musician or aspiring musician interested in improving those vital linkages between the ear and music notation can profit from the concentrated drill and practice MacGAMUT offers.

You may use the mouse to notate what you hear, or—if a MIDI keyboard is available and your instructor allows this option—you may play your responses on the keyboard, and the computer will notate what you play. If your instructor has changed the presets so that notation is not required in the ISC and HD aural-training exercises, you need enter only the correct identification of the interval, scale, chord, or harmonic progression to have your answer judged correct. In that case, if you choose to enter notation even though it is not required, MacGAMUT will calculate your score only on the identification, though it will still mark errors in your notation and give you helpful feedback. While you are working on an aural-training exercise or a Written Drill, whether you use the mouse or MIDI to notate the pitches on the screen, you can always use the mouse to edit your on-screen notation as much as you want before having your answer checked.

When you work in Practice Mode, the presets are temporarily disabled, allowing you the freedom to experiment with various ways of learning the material. Disabling the presets in Practice Mode will not alter the settings in Regular Mode. You can, therefore, always return to Regular Mode to test your skills against the standard your instructor has set or (if you have no instructor or if your instructor has chosen not to alter the presets) against the same rigorous standard which challenges thousands of MacGAMUT users throughout the world.

If you find that you are having difficulty distinguishing particular intervals, scales, or chords, you also have the option of creating your own aural-training drills in ISC with Make My Own Drill, selecting the specific intervals, scales, or chords you want extra drill on. ISC's Written Drill and Keyboard Drill provide the opportunity for intensive work on notating and playing intervals, scales, and chords. (*Note:* Although the Written and Keyboard Drills in ISC can provide unlimited drill and practice in mastering these skills, the drills are intended to function as adjuncts to the aural-training drills, not as computer-assisted instruction in music theory fundamentals or keyboard performance.) The Keyboard Drill requires a MIDI keyboard.

For the ISC exercises, it is assumed you know how to notate and identify simple and compound intervals, scales (major, minor, modal, pentatonic, whole tone, octatonic, etc.), and chords (triads and the most common 7th chords) in written work. The goal is to help you learn not only to identify accurately what you hear, but also to reinforce the connection between aural identification and the corresponding visual representation in standard music notation. Instructors who wish to reinforce aural skills with reference to a keyboard may choose to permit MIDI input as an optional means of response to some or all of the exercises.

Similarly, in the HD exercises, it is assumed that you are familiar with the

harmonic analysis symbols commonly used to label chords in harmonic progressions. The harmonic analysis symbols used in MacGAMUT follow the convention of using upper-case Roman numerals for major chords and lower-case Roman numerals for minor chords to identify chord quality (for instance, using ii rather than II to distinguish a minor two chord from a major two) and chord function (using a V/V rather than a II to label a secondary dominant).

Computer and System Requirements

MacGAMUT 2000 software has been designed for use with all Macintosh computers running System 7.x, 8.x, or 9.x, and for all Windows computers running Windows 95/NT or higher and using a SoundBlaster-compatible sound card.

Note for Mac OS X users: Although ***MacGAMUT 2000*** software is not Macintosh OS X-native, version 2000.05 and higher has been designed to run in the Classic Window of OS X. As of June 2002, however, you will not want to use MacGAMUT in Classic Mode until Apple releases a finished version of QuickTime which produces usable sound in the Classic Window. Apple has verified that the problems are in their software, although they have not fixed them in a timely fashion nor provided workarounds. We are, however, guardedly optimistic because the two worst Apple QuickTime 5 bugs (including one we reported a year ago) appear to be either partially or completely fixed in the pre-release versions of QuickTime 6. If you want to try MacGAMUT in OS X Classic Mode, it will be easy to tell whether QuickTime sound will work at all. Just click on a keyboard note in the QuickTime "Choose an instrument for the test chord" dialog that comes up right after the screen asking you to verify your registered user name. If a single click produces a pitch that sounds like machine-gun fire, the QuickTime version you are using is still buggy. If the pitch sounds like a pitch, there's a chance QuickTime sound will work.

Your Startup.mgs File

If you are upgrading from *MacGAMUT 3.8*: If you are upgrading to ***MacGAMUT 2000*** software from ***MacGAMUT 3.8***, you must use your ***MacGAMUT 2000*** CD-ROM for the first time together with your ***MacGAMUT 3.8*** floppy disk on a Macintosh computer. The ***MacGAMUT 2000*** software will pick up your name registration and your stats file from your ***MacGAMUT 3.8*** disk. It will build a new data file, compatible with ***MacGAMUT 2000*** software and readable on both Mac and Windows platforms. Your new data file, labeled "[your registered name] startup.mgs," will *not* be written automatically to your floppy disk; you must specify where you want it written.

Once your new startup.mgs file has been created, you no longer need your MG38 floppy disk to use ***MacGAMUT 2000***, and you may use the new software on both Mac and Windows computers interchangeably. After you have upgraded your file to

MacGAMUT 2000, you will no longer be able to use your old floppy disk as a ***MacGAMUT 3.8*** disk. ***Do not discard* your old *MacGAMUT 3.8* disk**, however; keep it in a safe place. If you would ever lose all copies of your working startup.mgs file, you can use your old MG38 floppy disk, together with the MG2000 CD, to create a new startup.mgs file on a Macintosh computer. If you are upgrading from ***MacGAMUT 3.8***, please skip ahead to the **Keeping track of your startup.mgs file** section.

If you are a new MacGAMUT user: If you are a new MacGAMUT user, you must download your own personal startup.mgs file before you can begin using ***MacGAMUT 2000***. Start from the MacGAMUT website at <www.macgamut.com> and go to the **Register your software** section. You will be asked to enter your name, e-mail address, and the unique Registration Number found on the back of your ***MacGAMUT 2000*** CD-ROM sleeve. Make sure you enter your name correctly, because you will not be able to change it after you have completed registration. Since your startup.mgs file will be sent to you as an attachment to an e-mail message, be sure to enter a working e-mail address that can receive e-mail attachments. The file you receive will be named "[your registered name] startup.mgs", and you will find it wherever your computer is set to receive and store attachments. If you don't know where to look for attachments, you can always use the **Find** function of your computer system to search for your startup.mgs file by name.

Note: If you do not have access to the Web, please call the MacGAMUT business Nat 1-800-305-8731 (toll-free from U.S. and Canada). We will take your name, Registration number, and mailing address over the phone and mail your startup.mgs file to you on a floppy disk.

Keeping track of your startup.mgs file: Your startup.mgs file is an indispensable part of your ***MacGAMUT 2000*** software, and you'll need to locate it each time you use the software. In fact, the quickest way to start ***MacGAMUT 2000*** is by double-clicking on your startup.mgs file. Both Macintosh and Windows computers will keep complete records of your MacGAMUT work in this file, automatically updating your statistics as you work. Your startup.mgs file also stores your "presets," either the original settings that come with the program or customized presets designed by your instructor. You can change the startup.mgs file's name, if you want, but always keep that .mgs on the end to identify it as a MacGAMUT startup file on both Mac and Windows computers.

If you'll be using ***MacGAMUT 2000*** only on your own computer, you may want to store your startup.mgs file on your computer's hard drive. If you're switching from one computer to another, you can keep your file on a central server in a lab, or

you can take it with you on removable media (e.g., a floppy disk, Zip disk, or Jaz disk). You can even send it to yourself as an e-mail attachment. If you anticipate using ***MacGAMUT 2000*** on both Macintosh and Windows computers, remember that, while Macs can read a PC-formatted disk, Windows machines *cannot* read a Mac-formatted disk without having additional software installed. If you'll be storing and transporting your startup.mgs file on a removable media disk, therefore, you should keep it on a PC-formatted disk so you'll be able to use it on both platforms interchangeably. On a Macintosh, you can even choose to initialize a floppy disk as a PC disk.

Whatever you name it, and however you store and move it, be sure to keep a recent back-up copy of your startup.mgs file on a different disk. Think of it as insurance, just in case something happens to the file you're using. ***MacGAMUT 2000*** (version 2000.05 and higher) makes it easy for you to back up your startup.mgs file each time you leave the program. It even suggests a back-up file name that includes both the date and time the back-up copy was made. Make as many back-up copies as you want and keep at least your two most recent back-up copies, but be sure to start up from the file you used last whenever you go back to work on MacGAMUT. If you find that you're having to re-master levels you had already mastered, you probably accidentally started with an out-of-date file. Your current startup.mgs file will automatically start you wherever you were when you ended your last MacGAMUT session, with all your time and level mastery statistics intact.

If you somehow lose all copies of this file, you can always return to the MacGAMUT website and pick up a replacement copy. Just register as you did before, using the same Software Registration Number and name you registered under initially. (If you have upgraded from ***MacGAMUT 3.8***, you must use your old MG38 floppy disk and your ***MacGAMUT 2000*** CD-ROM on a Macintosh computer to create a replacement startup.mgs file.) Of course, your replacement file will start you back at "zero," and you'll lose credit for all the work you've done. So you really don't want to lose all copies of the file you've been using.

Installing the Software

Installing *MacGAMUT 2000*: Though you must have your startup.mgs file before you can use MacGAMUT, you can go ahead and install the program as soon as you have your CD.

Mac only: To install MacGAMUT, double-click the MacGAMUT Installer Folder on your CD-ROM to open it; then double-click the MacGAMUT Installer, and follow the instructions. After you have installed MacGAMUT on your hard drive, you

can open the program by double-clicking the MacGAMUT icon in the MacGAMUT Folder on the hard drive.

Windows only: To install MacGAMUT, double-click the MacGAMUT Installer Folder on your CD-ROM to open it; then double-click **setup.exe** (it's the setup file with the small computer icon). You will need to restart your computer after the installation process is finished. After you have installed MacGAMUT, you can access it from the Windows Start menu: select Programs, then MacGAMUT, then the MacGAMUT 2000 application.

Installing QuickTime™: If you want to install QuickTime on either a Macintosh or Windows computer, download and run the latest installer from <www.apple.com/quicktime>. When the QuickTime Installer asks you to enter a registration number, ignore the request and continue on without making an entry on that screen. Do *not* enter your MacGAMUT Registration Number here. If you do not want to install all of QuickTime, you can install only what you need to use QuickTime with MacGAMUT. Begin by choosing the Minimum Install option and following those instructions, including restarting your computer when the installer is finished. Then, run the installer program a second time, this time choosing the Custom Install option and selecting QuickTime Music. Complete the installation process again, but this time you will not need to restart your computer afterwards.

Setting up Your Equipment

If you are using MacGAMUT only on lab equipment your instructor has already set up for student use, you can skip ahead to the next section, **Getting Started**. On the other hand, if you need to set up a computer to use the software (for example, if you have your own Macintosh or Windows computer, or if you are using the program in a computer lab which is not reserved solely for music students), this section contains information useful to you.

QuickTime software: MacGAMUT's QuickTime sound option is the only non-MIDI sound choice for Macintosh and is an option for Windows computers. With Windows, you have the choice of using either QuickTime for Windows or Windows sound. Like a MIDI keyboard, QuickTime and most /PC sound cards permit you to choose the instrumental sound you wish to hear. If QuickTime is not already installed on your computer, you can download and install the latest version of QuickTime from <www.apple.com/quicktime>.

Mac only: Even if your Macintosh already has the QuickTime extension, you may find that it does not have an adequate selection of QuickTime Musical

Instruments. You can check the available instrumental sounds by selecting "Change QuickTime Instrument" from MacGAMUT's **Sound** menu to view the lists of QuickTime Instruments. Any instruments listed in italic type are not available on the version of QuickTime installed on your Mac. If you find that your Mac has only one or two available instruments, you may want to download and install the latest version of QuickTime from <www.apple.com/quicktime>. You will want to have a range of instrumental sounds to choose from, since some of the QuickTime Instrument options are not suitable for playing chords and harmonic progressions, as they do not provide adequate definition among multiple voices.

Windows only: Even if you do not intend to use QuickTime to play the exercises on your Windows computer, you may still want to install it. With QuickTime installed, you will have a much larger choice of instrumental timbres to choose from whenever you select "Change MIDI/Windows Instruments." ***Caution:*** On some Windows computers, QuickTime may cause conflicts with other software installed on your computer, and MacGAMUT or other programs may not work properly if QuickTime is installed. If you have unusual problems with MacGAMUT (e.g., if it won't even start up), uninstall QuickTime. It is not always easy to uninstall QuickTime, especially if more than one version of it has been installed on the computer. If a simple uninstall doesn't solve the problem, search for all files with the word *quicktime* in the file name, and delete the files one at a time. Restart your computer and, chances are, MacGAMUT will now run properly.

See the **Installing the Software** section above for information on installing QuickTime on both Mac and Windows computers.

Mac only: If Opcode's OMS is installed on your Macintosh, and you do not get any sound when you try to use QuickTime, make sure that you are using QuickTime 3.0 or higher (highlight QuickTime in the Extensions folder in the System Folder, and then choose "Get Info" from the **File** menu to see what version is installed). The QuickTime Music OMS Driver should be in the OMS Folder in your System Folder. In addition, the QuickTime music synthesizer should be selected in your QuickTime settings file (access QuickTime Settings through Control Panels under the Apple menu). If you have to change any of these System settings, you may need to restart your computer before the changes will take effect.

MIDI keyboard: MacGAMUT is MIDI-compatible, though a MIDI keyboard is not required to use the program. If you have access to a MIDI keyboard, you may use it to hear the exercises played through the MIDI instrument rather than through the

computer. In addition, if your instructor has changed the ISC presets to *allow* MIDI entry, you have the option of entering your ISC responses by playing the intervals, scales, and chords you hear on the MIDI keyboard, and the computer will notate what you play on the screen. Unless your instructor has changed the MD and HD presets to *prevent* MIDI entry, you have the option of entering your MD and HD responses by playing the melodies and chord progressions you hear on the MIDI keyboard, and the computer will notate what you play on the screen. You always have the option of MIDI entry whenever you are working on MacGAMUT in Practice Mode. Only the Keyboard Drills are unusable without a MIDI keyboard. To use a MIDI keyboard, be sure "MIDI Sound" *[Mac only]* or "MIDI/Windows Sound" *[Windows only]* from the **Sound** menu is checked.

Mac only: On a Mac with MIDI connected through a USB interface, you can hear exercises played on your MIDI keyboard or through your external MIDI synthesizer only if QuickTime 3.0 or higher and Opcode's OMS or Mark of the Unicorn's FreeMIDI are installed on your computer. If neither of these is installed on your computer, OMS (<www.opcode.com/downloads/>) and FreeMIDI (<www.motu.com/english/download/index.html >) can be downloaded free of charge. Access QuickTime Settings through the Control Panels under the Apple Menu. Select Music from the popup menu at the top of the screen, and then click Edit List to bring up a screen that will let you install your MIDI synthesizer as a choice for QuickTime Music Playback. Click Add, then select the type of synthesizer in the Synthesizer box (General MIDI or Other MIDI Synthesizer). If OMS or FreeMIDI has been installed correctly, a choice of synthesizers should appear in the MIDI Port box. Select the synthesizer that you want to use as your sound source. You may edit the Name box if you wish. Clicking OK returns you to the initial QuickTime Settings screen. The synthesizer you just added to your list of QuickTime choices should now be listed in addition to the QuickTime Music Synthesizer (default) choice. Click on the radio button next to the name of your synthesizer, and click the close box. As long as your synthesizer is selected as the choice for playing QuickTime Music, whenever you select QuickTime from the **Sound** menu in MacGAMUT, the exercises will be played through your MIDI synthesizer instead of through the usual QuickTime synthesizer.

Windows only: On a Windows computer, you will need to make two additional choices from the **Sound** menu. Select your MIDI output device from the MIDI Output Device submenu and, if you plan to use MIDI input, select your MIDI input from the MIDI Input Device submenu.

General MIDI: General MIDI means that the synthesizer recognizes a standard list of 128 program numbers and their corresponding instrumental sounds.

QuickTime and many Windows/PC sound cards use General MIDI, but not all MIDI keyboards and synthesizers are General-MIDI-compatible. If the instruments you select when you choose Change MIDI Instrument from the **Sound** menu do not produce the timbres you expect from your MIDI keyboard, your keyboard does not recognize General MIDI messages. Select "General MIDI On" from the **Sound** menu to turn General MIDI Off, and select the timbres you want on the MIDI keyboard itself. *Note:* If the MIDI keyboard is not General-MIDI-compatible and General MIDI is on, you will probably not hear the metronome tick sound for Melodic Dictation. Instead, you will probably hear a "wrong" note (a pitch that may even be dissonant with the beginning pitch of the melody) played as the metronome pitch. If you want to hear the metronome beats played on an appropriate pitch before the melody begins, be sure to choose "pitch" from the "Hear Beats Before" submenu under the **Tempo** menu.

Local control: To make sure that you really are testing your "inner ear" and are not simply matching pitches by trial and error by picking out the answer on a MIDI keyboard, MacGAMUT attempts to turn MIDI local control off when you are working in Regular Mode. Not all MIDI keyboards accept local control messages, but if yours does, you will not be able to hear whatever you try to play on the MIDI keyboard. In Practice Mode, or after you have completed an example in Mastery Mode, local control is turned on again so that you can play and hear whenever and whatever you want on the MIDI keyboard. Local control is always turned on when you are actually entering your responses through MIDI.

MIDI channels, clock, etc.: If a particular brand or model of MIDI keyboard requires changing the MIDI input and output channels (channel 1 is the default for both), *[Mac only]* the MIDI port (the modem port is the default), or the MIDI clock speed (1.0 MHz is the default), you can make any of these changes by selecting the appropriate submenus from the **Sound** menu. For MIDI output, unless you select "1 (all voices on 1)", each of the voices in Harmonic Dictation and in four-voice chords is played on a separate channel (e.g., if you choose channel 1 for MIDI output, channels 1 through 4 are used for playing chords). If your MIDI set-up requires that MIDI Thru be on, make sure you have selected "MIDI Thru On" from the MIDI settings in the **Sound** menu (the default is "MIDI Thru Off").

Volume: In addition to using volume controls on your computer, external speakers, or MIDI keyboard, you can control the volume by selecting the "Volume" submenu from the **Sound** menu at the top of any Exercise Screen.

Headphones: If you are using MacGAMUT in a setting where sound may disturb others, you will want to use a pair of headphones.

Getting Started

If you are using MacGAMUT as a course requirement, your instructor may want you to use special presets that he/she has developed to customize the software for your course. You may want to check with your instructor to find out if you should install new presets before you spend a lot of time working on MacGAMUT.

Your CD-ROM is your key disk: For both Macintosh and Windows computers, your original MacGAMUT CD serves as a "key" disk, and it must be in your CD drive whenever you are running the program. If you are using MacGAMUT for a course, your instructor may have already installed the software on the hard drives of your music department's computers. But remember, even though you are running MacGAMUT from a hard drive, ***you must always insert your MacGAMUT CD in the CD drive*** of the computer to access the program. Installing MacGAMUT on more than one hard drive *is not* a violation of copyright, since the software may not be accessed without an original MacGAMUT CD and startup.mgs file. Duplicating the CD, however, ***is*** a violation of copyright.

Starting from your startup.mgs file: The easiest way to start up MacGAMUT is to double-click on your startup.mgs file. On both Macintosh and Windows computers, it's best to keep the '.mgs' file extension as part of the startup.mgs file name. On Windows computers, if file extensions are hidden, you will not see the .mgs as part of the file name, but you will know it's there because double-clicking your file will start MacGAMUT.

The program will begin by giving the name you registered under and asking you to verify that you have opened your own startup.mgs file. The program will also tell you when you last used the startup.mgs file you have opened, a convenient way for you to double-check that you have chosen your most recent file and not an older one. On this same program screen you'll find the CHANGE PRESETS button that allows you to install new presets easily whenever necessary. If MacGAMUT cannot find the Melodies or Progressions libraries linked to the presets file, you may also be asked to locate those libraries at this point. As the application starts up, you will hear a four-voice chord played blocked first and then arpeggiated, as a test of whatever sound source has been selected. If you do not hear this startup chord, you should start in Practice Mode, so you'll have ample opportunity to check your equipment and settings to locate the problem. (If you need serious help with a sound problem, check the **Sound Problems** section in the **Troubleshooting** section of this Guide or in the **Troubleshooting** file on your MacGAMUT CD-ROM.)

Choosing what to work on: When you first begin working with MacGAMUT, you

may want to spend a bit of time in Practice Mode, so you can become comfortable with MacGAMUT's note-entry procedures without the pressure of working for mastery. You may choose the program component you wish to work on from an on-screen menu, clicking on your selection. If you click Intervals, Scales, Chords, Melodic Dictation, or Harmonic Dictation, you will see the list of levels available for you to work on. If you choose Make My Own Drill, Written Drill, or Keyboard Drill, you will be given a choice of topics for those drills (Intervals, Scales, Chords). If you click Practice, you'll be given a choice of the Intervals, Scales, Chords, MD, or HD aural-training components.

When you see the list of levels, the current level is marked by a dark dot within the circle next to the level name. If you are using MacGAMUT in Regular Mode and it is Set for Mastery (that is, you must demonstrate your proficiency on each level's materials before you can proceed to the next higher level), none of the levels beyond your current level will be available to you, and those higher levels will be dimmed in the list you see. If you chose Practice from the earlier screen or click on the dot next to "Practice" on this screen, or if the preset for Mastery has been changed to Not Set for Mastery, all levels will be available to you. To choose any level that is not dimmed, move the arrow to point into the circle beside that level name and click. When you are ready to continue, click OK. To cancel any changes you may have made, click CANCEL. To return to the previous screen that allows you to choose among the various drill options, click EXIT.

NOTE: You must have a MIDI keyboard connected to your computer in order to use the Keyboard Drills. For more information about Make My Own Drill, Written Drill, Keyboard Drill, and Practice, see the separate entries for these topics later in this **User Guide**.

Using the Program

Menus and submenus: Click on the item you want in the menu bar at the top of the screen and select the specific menu topic you want by clicking on it. To choose from a submenu, click on the item you want in the menu bar at the top of the screen select the topic you want; move to the submenu; and then click on your choice there.

On-screen Help: Help in using specific features of the program is always available from any of the Exercise Screens. Choose the topic you want from the *[Mac only]* **MG Help** or *[Windows only]* **Help** menu, and information about that topic will appear in the message box in the lower left corner of the Exercise Screen.

Message box: Text messages appear in this box in the lower left corner of any Exercise Screen when, for example, you click CHECK ANSWER or you use the **MG**

Help/Help menu to access instructions about how to use a particular program feature. Use the scroll bar on the right edge of the message box to move up or down through the text. The color of the text in the Message Box will change every time a new message is posted to alert you to check the Message Box.

GO ON, EXIT, and QUIT: When you have finished one exercise and want to go on to the next, click GO ON or type 'g' to prompt the computer to select another exercise for you. When you are ready to leave the program, you may choose *[Mac only]* "Quit" or *[Windows only]* "Exit" from the **File** menu in any of the Exercise Screens. Alternatively, you may click the EXIT button or type 'X' (upper-case 'X') and then click QUIT on the next window. When you are working in Regular Mode and are working toward mastery on the current level, you cannot leave an Exercise Screen in that level without first having your answer checked at least once. In other words, once a new exercise is presented, the EXIT and GO ON buttons are not visible, the "Quit" or "Exit" menu choice is dimmed, and you cannot quit working on the program, change levels, change drills, or go on to another exercise without first completing your answer and clicking CHECK ANSWER. You may leave most of the program windows other than the Exercise Screens at any time by clicking an EXIT or QUIT button on the screen.

Changing the tempo: When you want to change the tempo of an example, choose a new metronome marking stated in beats per minute from the **Tempo** menu. If some of the tempo choices are dimmed, your instructor has altered the presets to stipulate a minimum tempo for that exercise, and you cannot reduce the tempo below that setting.

Changing the sound source: To change the sound source for MacGAMUT, make your selection under the **Sound** menu:

QuickTime sound:

If QuickTime is installed on your computer, change to QuickTime sound by selecting **Sound** from the menu bar and then choosing "QuickTime Sound."

1) To change the QuickTime instrument, select **Sound** from the menu bar and choose "Change QuickTime Instrument." If some of the listed instruments appear in italic type, they are not available in the version of QuickTime Musical Instruments installed on your computer.
2) You can listen to the QuickTime instrument you have chosen by clicking on individual keys on the piano keyboard in the instrument selection window.
3) When you have selected the QuickTime instrument you want, click OK. If the QuickTime instruments you select do not change the timbre as expected, turn General MIDI on (see General MIDI for more information). For Chords and HD, some of the QuickTime instrument sounds do not work well, as they

do not provide adequate definition among multiple voices. It is best, therefore, to experiment with changing the QuickTime instrument at a time when you can play a multi-voice exercise repeatedly while trying different instrumental sounds. For instance, you might experiment with various sounds after completing an exercise and before going on to the next exercise; in HD, you can test sound options by clicking TONIC or typing 't' as often as you like to hear the tonic chord.

4) If you do not have QuickTime on your computer, or if only one or two QuickTime instruments are available, you may want to install QuickTime software. See the section entitled **QuickTime software** earlier in this Guide for information about installing QuickTime.

Mac only: **MIDI sound:**

[*Note:* If you are using MIDI with a Macintosh computer equipped with USB, please see the **Read Me USB MIDI** file in your MacGAMUT Folder wherever you installed MacGAMUT. You will also find helpful information in the special section headed **Mac, USB, and MIDI** in either the **Troubleshooting** section of this Guide or the **Troubleshooting** file on the MacGAMUT CD-ROM.]

1) To change to MIDI sound from QuickTime sound, choose "MIDI Sound" under the **Sound** menu.
2) To change the instrumental sound played by your MIDI keyboard, choose "Change MIDI Instrument" under the **Sound** menu. If the instrument you select does not produce the timbre you expect, either you have not selected "General MIDI On" or else your MIDI keyboard is not General-MIDI-compatible.
3) The General MIDI On setting is a "toggle" switch; to change the setting, select "General MIDI On/Off" under the **Sound** menu.
4) The default setting for MIDI input is channel 1. To choose a different channel, select "MIDI Input Channel" from the **Sound** menu, and select the channel you want from the submenu.
5) The default setting for MIDI output is channels 1-4. To choose different output channels, select "MIDI Output Channel" from the **Sound** menu, and select the channels you want from the submenu. If your MIDI keyboard is not General-MIDI-compatible, and you want to hear MIDI output in multiple timbres for HD exercises, make your instrument selection on the keyboard itself. If your keyboard has only one output channel, select "1 (all voices on 1)" from the submenu.
6) The modem port is the default setting for a serial MIDI interface connection. If you need to change the port, choose "MIDI Port" from the **Sound** menu, and select the appropriate port from the submenu.
7) MIDI clock speed is set at 1.0 MHz. To change it, choose "MIDI Clock Speed"

from the **Sound** menu and select the appropriate speed from the submenu.

8) The MIDI Thru setting is a "toggle" switch; to change the setting, select "MIDI Thru On/Off" from the **Sound** menu.
9) If your MIDI keyboard accepts Local Control On/Off messages ("On" lets you hear what you play on the keyboard), you cannot change that setting when you are using MacGAMUT. MacGAMUT turns Local Control off whenever you are working on an exercise in Regular Mode, except when you are actually entering notation through MIDI. Otherwise, Local Control is turned on.

Windows only: **MIDI/Windows sound:**

1) To change to MIDI/Windows sound from QuickTime sound, choose "MIDI/Windows Sound" under the **Sound** menu.
2) To change the instrumental sound played by your MIDI keyboard or by Windows sound, choose "Change MIDI/Windows Instrument" under the **Sound** menu. If the instrument you select does not produce the timbre you expect, either you have not selected "General MIDI On" or else your MIDI keyboard is not General-MIDI-compatible. If you have relatively few instruments to choose from, you might want to install QuickTime so you can access the complete selection of MIDI/Windows instrument sounds using the QuickTime selection dialog. (Don't worry–you'll still be using MIDI/Windows sound unless you specifically select QuickTime!) See the section entitled **QuickTime software** earlier in this Guide for information about installing QuickTime.
3) The General MIDI On setting is a "toggle" switch; to change the setting, select "General MIDI On/Off" from the **Sound** menu.
4) To select a MIDI keyboard input device, choose from the "MIDI Input Device" submenu under the **Sound** menu.
5) To choose a different MIDI/Windows sound source, choose from the "MIDI Output Device" submenu from the **Sound** menu. The default choice is the MIDI MAPPER, using the sound source already selected on your computer.
6) The default setting for MIDI input is channel 1. To choose a different channel, select "MIDI Input Channel" from the **Sound** menu, and select the channel you want from the submenu.
7) The default setting for MIDI output is channels 1-4. To choose different output channels, select "MIDI Output Channel" from the **Sound** menu, and select the channels you want from the submenu. If your MIDI keyboard is not General-MIDI-compatible, and you want to hear MIDI output in multiple timbres for HD exercises, make your instrument selection on the keyboard itself. If your keyboard has only one output channel, select "1 (all voices on 1)" from the submenu.
8) MIDI clock speed is set at 1.0 MHz. To change it, choose "MIDI Clock Speed"

from the **Sound** menu and select the appropriate speed from the submenu.

9) The MIDI Thru setting is a "toggle" switch; to change the setting, select "MIDI Thru On/Off" from the **Sound** menu.
10) If your MIDI keyboard accepts Local Control On/Off messages ("On" lets you hear what you play on the keyboard), you cannot change that setting when you are using MacGAMUT. MacGAMUT turns Local Control off whenever you are working on an exercise in Regular Mode, except when you are actually entering notation through MIDI. Otherwise, Local Control is turned on.

Changing instruments: If you are using QuickTime sound, choose "Change QuickTime Instrument" from the **Sound** menu. *[Mac only]* If you are using MIDI sound on a Macintosh, choose "Change MIDI Sound" from the **Sound** menu. *[Windows only]* If you are using MIDI or Windows sound on a Windows computer, choose "Change MIDI/Windows Instrument" from the **Sound** menu. For HD, unless your instructor has changed the default settings, you may select "Change Instruments" to choose a different instrument for each voice. Whenever you are using computer-generated sound, it is a good idea to try a variety of timbres to find one that works well for you. The same instrument choice may sound quite different in Windows Sound and in QuickTime Sound, so you may want to try a variety of instruments in both sound sources.

Changing the sound volume: When you want to increase or decrease the volume level of your sound source, choose "Volume" from the **Sound** menu, and then choose the volume level you want from the submenu. For HD, unless your instructor has changed the default settings, you may choose "Change Voice Volume" from the **Sound** menu to make one or more voices louder. If you are using computer sound on either Macintosh or Windows computers and the volume does not seem to change much, try QuickTime sound. If you are using QuickTime 3, install a newer version of QuickTime. See the section entitled **QuickTime software** earlier in this Guide for information about installing QuickTime.

Changing levels or drills: Any time you would like to review a level before the one you are currently working on, or if you want to switch to a more difficult level (if you are working in Practice Mode or if your instructor has changed the presets to Not Set for Mastery in Regular Mode), choose "Pick Level" from the **Change** menu. You will be given the opportunity to choose from the list of levels you saw just before you began work on the exercises. To switch to a different part of the program, choose the topic you would like from the **Change** menu. If you choose "Make My Own Drill," "Written Drill," or "Keyboard Drill," you will also need to choose the specific type of drill you want (Intervals, Scales, or Chords). You may also click the EXIT button or type 'X' and then choose the topic you want from the

next screen. *Note:* Unless your instructor has changed Regular Mode presets to Not Set for Mastery, you cannot leave the current exercise in a level you are attempting to master without first completing that exercise. In other words, once a new exercise is presented, you cannot quit working on the program, change levels, change drills, or go on to another exercise without first having your answer checked.

How exercises are presented: For each exercise in ISC, you will be given the clef and the beginning pitch (or the bass pitch in the grand-staff chord levels). In MD, unless your instructor has changed the default settings, you will sometimes be given a beginning pitch, while other times you will be allowed to play the tonic chord but will not be given the beginning pitch. In addition, in MD you will be given the key signature, and the first bar line will be positioned for you. In HD, you will see a grand staff with the key signature and as many pitches of the first chord as your instructor has chosen to show you. For any of the ISC aural-training exercises, you will be asked to identify what you hear and, unless your instructor has changed the presets, to notate what you hear as well. For any Written Drill, you must supply notation for a given identification, and for any Keyboard Drill, you must play your response on a MIDI keyboard. For any of the MD exercises, you must notate the melody you hear, complete with durations and proper barring. In HD exercises, you must identify the chord progression by entering the appropriate harmonic analysis symbols in the boxes under the staff, and you may also be required to notate any number of voices on the staff, depending on what level you are working on and how your instructor has altered the presets. You cannot change a given pitch in any MacGAMUT exercise.

In all MacGAMUT ear-training drills, you cannot begin entering your notation or identification while the exercise is being played. Part of the goal of ear-training is to develop your musical memory. If you are busy entering the first interval in a MD exercise while the melody is still playing, for instance, you are unlikely to remember much beyond that first interval.

Playing an exercise: When you are ready to hear an aural-training exercise, click the PLAY button, type 'p', or tap the space bar on the computer keyboard. Unless your instructor has changed the presets in ISC exercises, you may hear an exercise played only twice before you click CHECK ANSWER the first time. In MD, unless your instructor has changed the presets, you may hear a melody played four times before you click CHECK ANSWER. In HD, you may hear a harmonic progression played two, three, or four times, depending on the length of the progression, unless your instructor has changed the presets to permit more or fewer hearings. The number of plays remaining appears in the Message Box, and the PLAY button will disappear after you have heard the exercise the maximum number of times. After you have clicked CHECK ANSWER or typed 'c' the first time to have your response

scored, you may play the exercise as often as you wish.

In MD, the default setting allows you to hear preparatory beats to establish the tempo before a melody is played. The default number of beats played is determined by each melody's time signature and whether the melody begins with an anacrusis. To change the number of beats you hear for a specific exercise, choose "Hear Beats before Melody" from the **Tempo** menu, and select the number of beats from the submenu. If you would prefer to hear no preparatory beats before the melody, choose "none." Also, you may choose whether you will hear the preparatory beats played as a tick or as a pitch. *Note:* If you are using a MIDI keyboard, and General MIDI is off or MIDI Output Channel "1 (all voices on 1)" is selected, the beat will be played as a pitch.

If your instructor has changed the MD presets to permit it, you may also hear only half of the melody played at a time, choosing whichever half you want to hear from the "Play Original" submenu under the **Play** menu. Playing either the first or second half of a melody counts as a half-playing in calculating the number of plays remaining. Also, your instructor may have changed the presets to permit you to hear your answer played either whole or by halves, before having it checked. You may choose this option from "Play Mine" submenu under the **Play** menu. If the TONIC button appears on the screen, you may hear the tonic chord of any MD exercise played at any time by clicking the TONIC button or by typing 't'.

In HD, you may hear the tonic chord of an exercise played at any time by clicking the TONIC button on the screen or by typing 't'.

If the computer is connected to a MIDI keyboard and you would prefer to hear the exercises played through MIDI, choose "MIDI Sound" *[Mac only]* or "MIDI/Windows Sound" *[Windows only]* from the **Sound** menu. *Windows only:* You may also need to select the appropriate MIDI interface device from the "MIDI Output Device" submenu from the **Sound** menu. If MIDI sound is already selected and you want to switch to QuickTime sound, choose "QuickTime Sound" from the **Sound** menu.

Entering identifications in ISC: To enter the identification of the interval, scale, or chord you hear in an aural-training exercise, click in the box that contains the correct identification for the pitches you heard. The computer will show you when your click registers by inverting the box (you will see white lettering on a dark background instead of dark lettering on a white background). If you change your mind, just click a different box. In some cases, you will need to select answers from two different sets of boxes in order to enter a complete answer. For example, you will need to indicate both the quality and the inversion of a chord for many of the

Chord exercises. In Intervals and Scales, if there are too many answer choices to display in an array of boxes under the staff, you will use a menu to select your answer, and a Choose the I.D. button will appear above the message box. Just click on the popup menu *[Mac only]* or click on the "Choose I.D." button *[Windows only]* to see all the available choices, and select the correct interval or scale identification by clicking on it. The identification you have chosen will then be displayed on the screen.

Entering harmonic analysis symbols in HD: From the array of harmonic analysis symbols under the staff, click on the box or boxes needed to identify a chord. The computer will show you when your click registers by inverting the box (you will see white lettering on a dark background). If you change your mind, just click a different box. You can un-highlight all boxes you have selected from the array by clicking the CLEAR CHOICES button. Once you have selected the boxes needed to provide a complete harmonic analysis of a chord, click in the appropriate box under the staff to position the analysis symbols. You can change the harmonic analysis by choosing different symbols and then clicking under the chord again to replace your earlier entry.

To insert a harmonic analysis symbol between two adjacent symbols where there is no empty entry box, first highlight the appropriate symbols from the array of harmonic analysis boxes, then position the cursor where you want to insert the symbols between two adjacent harmonic analyses, and click the mouse. All symbols under the staff to the right of the insertion point will move one space to the right.

To close up any spaces between harmonic analysis symbols under the staff, click the SQUEEZE HA button to shift all harmonic analysis symbols to the left, eliminating any empty entry boxes between symbols.

You can erase a harmonic analysis symbol by clicking on the Erase box or by typing 'e' to highlight it. When you move the cursor over a Roman numeral, it will turn into an "eraser." Click on the Roman numeral to erase it. Turn the eraser off by clicking again on the Erase box or by typing 'e' again. You can also erase a harmonic analysis symbol by clicking the CLEAR CHOICES button and then clicking on the Roman numeral you want to erase.

To enter a secondary dominant, click on the "/" (slash) symbol box located to the right of the inversion symbols in the harmonic analysis array; then click in a box under the staff to position it. Small boxes will appear on either side of the slash to allow you to enter the "left" and "right" sides of a secondary function analysis. If you have already entered a harmonic analysis in the box, click slightly to the right or left of the analysis to position the "/" symbol as you wish. You can replace either

the left or right side of a secondary function analysis by highlighting the appropriate boxes in the harmonic analysis array, then clicking to the left or right of the slash, depending on which side you want to replace. To replace a previously entered secondary dominant with a single Roman numeral, select the new Roman numeral and then click on the slash of the secondary dominant you are replacing.

To indicate that the root of a chord is raised or lowered, click on the appropriate small accidental symbol to the left of the Roman numeral and inversion boxes. *Note:* Indicate the Neapolitan as a lowered II chord.

Entering Notation with the Mouse

What's required: The staff consists of a series of entry slots for notes, ranging from one entry slot in Intervals to as many as 26 entry slots in MD. In MD, the notation entry slots are individually numbered above the staff. You may use the mouse to enter your notation in any order, skipping and inserting notes as you wish, or even starting with the last pitch and working backward if you prefer. You may change any previously entered notation at any time while you are working on an exercise. You have not completed an MD exercise until you have added bar lines to mark the measures. In most Intervals and Chords exercises, for greater ease of note-entry, you must enter the notation as a sequence of pitches, as if the interval or chord were arpeggiated , even if the pitches are played as a harmonic interval or a block chord. In Intervals drills, you will have just one note to enter following the given note. For harmonic Intervals drills, an arrow to the right of the staff indicates whether the pitch you must notate is higher or lower than the given pitch. Unless your instructor has changed the presets for the Scales drills to require you to enter all notation information, the staff will already have the notes of the scale (*without* accidentals) written on it when a Scales exercise in the major, minor, and modal scale levels is first presented. You will only have to position the appropriate accidentals on the staff and identify the scale you hear. In the Chords exercises, triads and 7th chords that are not on the grand staff (i.e., not in the grand-staff levels where Chord exercises are presented in chorale-style partwriting) must be notated in ascending order (in other words, from the given note up). In the grand-staff Chord exercises, the bass pitch will be given, and you must enter the pitches for the tenor, alto, and soprano voices "stacked" above the bass pitch, in the same way you enter notation in HD. For HD exercises, you may be required to notate any number of voices—from none to four—on the staff, depending on what level you are working on and how your instructor may have changed the presets.

Staff paper and pencil: Most MacGAMUT users quickly become adept at entering notation on the computer screen with the mouse, and many find that it

soon becomes as natural to them as writing on staff paper. But some find that the mechanics of notation entry on the computer screen get in the way at the beginning, Writing notation down on staff paper first may be especially helpful when you are working on MD and HD (when notation is required for HD). For example, in the MD exercises, some students may forget the end of a melody while they are sorting out the complexities of getting the first part onto the screen. If you find that entering notes on the screen seems awkward at first, try taking the melody down with a pencil on a piece of staff paper as you listen to it the first couple of times. Then you can take your time and concentrate on computer notation entry as you transfer your transcription to the computer screen. Use your last hearing of a melody or harmonic progression to double-check and correct your on-screen notation.

Entering pitches: To enter a pitch on the staff, begin by moving the arrow/cursor into the staff area. When you reach the notation-entry area, the arrow will become a note. In most ISC exercises, the cursor will change to a whole note. In HD and grand-staff Chords, the cursor will change to either a whole note or a solid notehead without stem, depending on which voice you have chosen to notate. In MD it will change to whatever duration is highlighted in the row of boxes above the staff or to whatever duration you have previously selected for that slot. When you have moved the note to the proper position on the staff, click the mouse button to fix the note in position (*Mac only:* depending on the speed of your Macintosh processor, you may find that you have to click slightly more deliberately than usual to enter notation on the staff). In MD, each exercise is presented with the "generic" notehead pre-selected in the boxes above the staff. You may choose to use this notehead to enter pitches on the staff without durations. Or you may select any of the other duration options from the row of boxes above the staff by clicking on your choice or by typing the numerals '1' through '7' to select the boxes in order from left to right. In HD, each exercise begins with the cursor as a whole note in the staff area, ready to enter the soprano voice in the upper staff and the bass voice in the lower staff. You may select other voices to notate in HD by clicking on the SATB boxes just to the left of the grand staff (or you may select the voices to enter by typing '1' for Bass, '2' for Tenor, '3' for Alto, and '4' for Soprano). When you click the appropriate boxes (or type '2' or '3') to enter the tenor or alto voice, the cursor will appear as a solid notehead without stem in the appropriate staff. In grand-staff Chords, the bass note is given and cannot be changed, so the cursor will begin as a filled-in whole note for notating the tenor voice in the lower staff and only SAT boxes will appear to the left of the grand staff.

Entering durations: In ISC and HD, the music notation you will enter consists solely of whole notes (with solid noteheads for the Alto and Tenor voices in HD and grand-staff Chords to make a graphic distinction between the two voices in each

staff), so duration is not a factor. In MD, you may choose to enter both pitches and durations simultaneously by selecting duration options from the row of boxes above the staff and positioning the selected symbols on the staff. As an alternative to clicking on the duration boxes, you may type the numerals '1' through '7' on the computer keyboard to select the duration values reading from left to right in the boxes above the staff. Whether you select a duration by clicking in a box with the mouse or by typing a numeral, your selected duration will be highlighted in the row of boxes above the staff. Selecting any duration cancels whatever duration was previously selected, except that a "dot" may be combined with any duration value except the smallest shown for a particular exercise. To select a dotted value, first select the duration value, either by clicking on the box or typing the numeric equivalent, then select the dot, either by clicking on the dot box farthest to the right of the row of duration boxes or by typing '.' (period). If you choose to enter only a duration without specifying a pitch, select the duration and click on the appropriate entry-slot number above the staff. Your choice of duration will appear as a small note temporarily replacing the entry-slot number. Then, when you move the cursor into the staff area to enter the pitch at a later time, the cursor will automatically change to the duration shown above that entry slot. Similarly, if you want to change the duration but not the pitch of a note (or to specify a duration for a "generic" solid notehead without stem) you have already positioned on the staff, select a duration and click on the entry-slot number above the note you want to change.

Entering accidentals: If you want to put an accidental in front of a note, click the accidental in the row of boxes below the staff. Or you may select an accidental by typing 'd' for double-flat, 'f' for flat, 'n' for natural, 's' for sharp, or 'x' for double-sharp. Whether you select an accidental by clicking in a box with the mouse or by typing on the computer keyboard, your selected accidental will be highlighted in the row of boxes below the staff. Selecting any accidental cancels whatever accidental was previously selected. When you move the cursor into the note-entry area of the staff, it will change to the accidental you have selected. Position the accidental on the appropriate line or space just to the left of the note and click to fix it in place on the staff (*Mac only:* depending on the speed of your Macintosh processor, you may find that you have to click slightly more deliberately than usual to enter notation on the staff). If you want to replace one accidental with another, select a new accidental, move it into position over the old accidental, and click to replace the one you previously entered.

Moving notation: To move a note or accidental you have previously positioned on the staff to a new location, either up or down, move the mouse until the note or accidental cursor turns into an arrow pointing directly into the symbol you want to move. Click and hold the mouse button down as you drag the symbol up or down to

its new position, releasing the mouse button to fix the symbol in place. In any exercise requiring you to notate more than one pitch, it is possible to move notation sideways as well as up and down. If you want to insert a note between two notes that are next to each other on the staff, simply move the new note into position between them and click to insert the new note. The computer will move the following notes (or chords) to the right to make room for the new pitch. (*Note:* In HD, when you insert a note between chords that are already either partially or fully notated, the program assumes you are inserting the first note of a new chord; in other words, if you have notated pitches in more than one voice and you insert a note between two adjacent notes in one voice, chords will be moved to make room for inserting a new chord.) If you have left spaces between pitches that should be next to each other, or if you have removed notes leaving blank spaces, click the SQUEEZE button to move everything as far to the left as possible, filling in any empty note-entry slots. (*Note:* If you have left an empty entry slot between an accidental and the note you want it to apply to, the computer will not squeeze the two together; you will need to erase either the note or the accidental and move it yourself before you click SQUEEZE.) If there are no empty spaces between notes, nothing will happen when you click SQUEEZE.

Scrolling in MD: Your computer screen may not be wide enough to display all 26 note-entry slots of a MD exercise, so you may need to "scroll" to the right to access any slots that are beyond the right edge of the MD window. To scroll the staff in MD, use the pairs of right and left arrow buttons immediately below the staff on both the right and left sides of the MD window. A single click on any of the arrows will move the staff and notation one note-entry slot in the direction of the arrow. A double-click on an arrow will move you quickly to the beginning or end.

Entering rests and bar lines: In MD, select rests and bar lines from the boxes above the staff and position them on the staff much as you do notes. Rests may be entered, moved left and right, and inserted just as notes are, though they may not be moved up or down on the staff since rests have no pitch. A rest occupies a notation-entry slot just as if it were a note. Your response to an MD exercise is not complete until you have inserted bar lines to mark the measures. Select bar lines by clicking in the boxes in the upper right-hand corner of the MD screen or by typing 'b' for a single bar line or 'D' (upper-case 'D') for the double bar line. Bar lines may be added to your notation at any point; they must be positioned in a narrow space between note-entry slots.

Removing notation: If you want to remove a note, accidental, rest, or bar line you have written on the staff, move the mouse until the cursor becomes an arrow pointing directly into the symbol you want to remove from the staff, just as you do to move a note or accidental up or down on the staff; click and drag the item off the

staff (up, down, or sideways) until it turns into an arrow again; release the mouse button and the symbol will disappear. If you accidentally click the mouse button on the staff when the cursor is anything other than an arrow, you may unintentionally insert a note or accidental instead of removing one. Try again, this time making doubly sure you are pointing directly into the note or accidental with an *arrow* when you click the mouse button. In MD, while it is possible to drag off a bar line if a bar line is selected from the boxes above the staff, the bar line cursor is so narrow that you will find it much easier to remove a bar line if a duration is highlighted. In HD, you can erase all the pitches of a chord at once. Click on the Eraser box or type 'e' to highlight it. When you move the cursor onto the staff, it will turn into an "eraser" (a large circle with an "X"). Click on a chord to erase the entire chord. To undo the eraser's most recent action, choose "Undo" from the **Edit** menu. To turn the eraser off, click on the Eraser box or type 'e' again.

Entering Notation through a MIDI Keyboard

MIDI entry is an option: If you have a MIDI keyboard connected to your computer, you may be able to enter your responses by playing them on the keyboard. Unless your instructor has changed the ISC presets to allow MIDI entry, you may *not* enter your ISC responses in Regular Mode by playing what you hear on the MIDI keyboard. You have the option of entering your MD and HD responses by playing the melodies you hear on the MIDI keyboard, unless your instructor has changed the presets to prohibit MIDI entry. You always have the option of MIDI entry whenever you are working in Practice Mode. Only the ISC Keyboard Drills actually require use of a MIDI keyboard. To use a MIDI keyboard to enter notation, choose "MIDI Sound" *[Mac only]* or "MIDI/Windows Sound" *[Windows only]* from the **Sound** menu. *Windows only:* You may also need to select the appropriate MIDI interface device from the "MIDI Input Device" submenu from the **Sound** menu. If you are permitted only to hear exercises played through a MIDI keyboard, but you are not permitted to enter your response by playing on the keyboard, the message **MIDI Sound On** *[Mac only]* or **MIDI/Windows Sound On** *[Windows only]* will appear on the screen above the PLAY button. If ENTER MIDI and CANCEL buttons appear above the PLAY button, in addition to hearing the exercises played through the MIDI keyboard, you also have the option of entering your responses by playing them on the keyboard.

MIDI entry in ISC: To respond to an ISC exercise by playing on a MIDI keyboard, first click the ENTER MIDI button or type 'm' on the computer keyboard, then begin playing whenever you are ready, starting with the given note. Since duration is not a factor in the ISC exercises, you may play at any tempo you choose. When you have finished playing, click anywhere on the screen (except on the CANCEL

button) to see the notation of your performance. If you are dissatisfied with the notation on the screen and you want to attempt a new MIDI entry, click the ENTER MIDI button or type 'm' and play your response again. This new entry will replace your on-screen notation only after you click anywhere on the screen. Should you decide that your second effort was not as good as the notation already on the screen, click the CANCEL button to cancel your most recent attempt. You may attempt MIDI keyboard entry as often as you like, and you may edit the on-screen notation with the mouse just as you would if you had initially entered your response with the mouse (except in the ISC Keyboard Drills, where you may only enter notation through the keyboard).

MIDI entry in MD: Since tempo and rhythm are important musical components of melodies, the MD exercises require more precision in your MIDI entries, but you have several options. If your keyboard skills are good, you may choose to enter the pitches and durations simultaneously by selecting "Enter Pitches and Durations" from the **MIDI Entry** menu. After you click the ENTER MIDI button or type 'm', your MIDI keyboard will play preparatory beats to establish the tempo, and you must begin playing at that tempo and in rhythm any time after you hear the last beat. The computer will begin calculating the durations you play as soon as you play your first pitch. To see or change the number of beats you will hear, select "Beats before MIDI Entry" from the **MIDI Entry** menu and choose the number of beats from the submenu. To see your MIDI response to an MD exercise notated, click anywhere on the screen (except on the CANCEL button) after you have finished playing. If you are dissatisfied with the notation on the screen, you may make additional attempts, following the same procedures described in the **MIDI Entry in ISC** paragraph immediately above. You may make as many additional attempts to enter your response as you wish, and you can always edit your entry as much as necessary using the mouse. At the very least, you will need to use the mouse to mark the measures of your melody with bar lines.

If your keyboard skills are not quite up to the task of entering pitches and durations simultaneously, you may choose to enter the pitches and durations through a MIDI keyboard in two separate entries. First, select either "Enter Pitches" or "Enter Durations" from the **MIDI Entry** menu. Then click the ENTER MIDI button or type 'm'. If you are entering only pitches, you may begin playing whenever you wish. Since duration is not a factor in this entry option, you may play at any tempo and rhythm you choose. If you are entering only durations, your MIDI keyboard will play preparatory beats to establish the tempo. (To change the number of beats you will hear, see the preceding paragraph.) You must begin playing at that tempo and in rhythm any time after the last "metronome" beat, using any key on the MIDI keyboard. Whether you are playing pitches only or durations only, click anywhere on the screen (except on the CANCEL button) to see

your response notated. If you chose to enter only the pitches of an MD exercise first, you will see generic noteheads on the staff, representing the pitches you played. If you chose to enter only the durations of an MD exercise first, you will see the durations you played represented by small notes above the staff. If you are dissatisfied with the notation on the screen, you may make additional attempts, following the same procedures described in the **MIDI Entry in ISC** section above. Whenever you choose to add durations to the pitches you entered previously or to add pitches to the durations you entered previously, make the appropriate selection from the **MIDI Entry** menu and proceed as described earlier in this paragraph. Again, you may make as many additional attempts to enter either pitches or durations as you wish, and you can always edit your entry as much as necessary using the mouse. At the very least, you will need to use the mouse to mark the measures of your melody with bar lines.

MIDI entry in HD: In Harmonic Dictation, click on the SATB boxes directly below the ENTER MIDI button to indicate which voices you will enter from the keyboard. Click on the boxes individually to turn them on and off. If all four SATB boxes are highlighted, then MacGAMUT expects you to play all four voices, one chord at a time. In that case, you need not play all the notes of the chord simultaneously, but you must play all four notes of the chord before going on to the next chord. (If two different voices share the same keyboard note, play that note twice.) Similarly, if two boxes are highlighted, play the pitches for those two voices and only those two voices, again one chord at a time. Once you have selected the voices to enter, click ENTER MIDI or type 'm' and begin playing. When you finish, click anywhere on the screen (except the CANCEL button), and whatever you played will replace any previously entered notation for the highlighted voices. You may choose "Undo" from the **Edit** menu to cancel your last MIDI entry before you begin to edit your notation. Please note that, even if you have entered the notation for an HD exercise using MIDI, you must still use the mouse to enter your harmonic analysis for the chord progression.

Making the Grade

Checking your answer: Whether you enter your response to an exercise using the mouse or through a MIDI keyboard, check it carefully and correct any errors you find. When you are ready to have the computer check your answer, click the CHECK ANSWER button or type 'c'. If the score for your response is high enough the *first* time you have it checked, the exercise counts toward Mastery. Specific errors will be marked in your on-screen notation and identification. Also, more general information about problems you had with the exercise will appear in the message box in the lower left corner of the screen.

Progress toward mastery: With the default Original Presets, you are required to get 8 out of the last 10 exercises correct to achieve mastery on a level. Your instructor may have changed those presets to set the requirements for mastery either higher or lower. Each aural-training Exercise Screen displays your mastery goal and your progress toward mastering the level, both numerically and graphically. Numerically, your mastery goal is shown as "Goal: A out of B," with A being the number correct you need out of the number B to achieve mastery. "Score: A out of B" records your progress toward that goal. Across the bottom of the window, a row of boxes graphically presents the same data. The number of boxes in the row corresponds to the number "B" in the "Goal: A out of B" ratio. Each correct response to an exercise is recorded as a green box; each incorrect response is recorded as a red "X" in a box. As you complete each exercise, your score for that exercise is entered in the last box on the right, and your record for previous exercises shifts one box to the left. A quick glance at the bottom of the window will tell you how you are progressing toward your goal of mastery on the current level.

Learning from your mistakes: Even if your response contains errors, you can still learn from an exercise by taking the time to hear the exercise played again (you may now hear the exercise as often as you wish) and trying to correct it before clicking the CHECK ANSWER button again. Unless your instructor has changed the presets, you can have your answer checked twice in ISC, three times in MD, and two or three times (depending on the level you are working on) in HD. If your response still contains errors when checked the last time, the correct answer will appear on the screen with your answer. In ISC, you may now click the PLAY NOTES button to hear what you notated or click the PLAY I.D. button to hear the identification you furnished; click the PLAY CORRECT button (or type 'p' or tap the spacebar) to hear the original exercise again. If you want to hear the difference between the answers on the screen and any other possible answer, use the **Play** menu to listen to as many different possibilities as you wish, comparing them to the notation and identification on the screen. In MD, you may compare your melody to the correct response by selecting the PLAY CORRECT and PLAY MINE buttons. You may also use the "Play Original" and "Play Mine" submenus under the **Play** menu to play and compare the first and second halves of both the correct melody and your response. In HD, you may hear the differences between the correct response and the notation you have entered on the staff by selecting the PLAY CORRECT and PLAY MY NOTES buttons. Unfortunately, MacGAMUT cannot play an incorrect harmonic analysis without your having entered corresponding notation, because the software has not yet been taught to partwrite.

How the computer scores MD exercises: The total number of possible points for each melody is twice the number of notes, rests, and bar lines in the melody, not

including an initial given note. One point is subtracted for each incorrect pitch or rest, for each incorrect duration, for each bar line that is missing from its correct position, for each bar line incorrectly placed, and for an incorrect number of beats in a measure. If you enter more notes than needed, the computer subtracts points for the extra notes as well. The computer judges your entry whenever you click CHECK ANSWER or type 'c' (you do NOT have to enter all durations correctly before the computer can judge the pitches, for instance). Although the computer may occasionally be confused by your response, just as a human grader might be, the computer will generally give you credit for whatever is correct, even if you have omitted notes from or added notes to the given melody. To give you some encouragement, the computer also indicates portions of your melody that have the correct contour (a transposition of a segment of the melody) if they appear close to the place they occur in the given melody. However, because such segments are evidence that you have either lost the tonal center or, at the very least, confused the tonal function of the pitches in the transposed segments, the pitches are still counted wrong.

How the computer scores HD exercises: The total number of possible points for each harmonic progression exercise is twice the number of chords, plus one point for each pitch which must be notated if only bass notation is required, or one-half point for each pitch if more than the bass voice must be notated. Two points are subtracted from the total for each incorrect chord analysis. One point is subtracted for each "good wrong answer," an incorrect chord identification that has the same bass note and a similar harmonic function compared with the correct response (such as ii^6 instead of IV). If either a chord quality or inversion is wrong, one-half point is subtracted. Secondary dominants are scored similarly: two points off for a wrong answer, one point off for a "good wrong answer" (same bass note and similar function, such as ii instead of V/V), and one point off for an incorrect identification of the right-hand side of the analysis (such as V/vi instead of V/ii). Each error in notation costs one point if only the bass must be notated, or one-half point if more than the bass voice must be notated.

Additional Drill Opportunities

Practice Mode: When you want to work without the pressure of trying to achieve Mastery or the restrictions that the presets (whether altered by your instructor or not) impose on the way you interact with the program, you may want to try Practice Mode. Either select **Practice** from the initial menu of drill choices, choose "Practice" from the same screen you use to pick a level to work on, or choose "Switch to Practice Mode" from the **Change** menu on any Exercise Screen. Practice Mode cancels any presets for the program. In ISC, whatever skill you choose to work on,

Practice Mode is "Not Set for Mastery," requires you to enter identification but not notation (though any notation you choose to enter will still be checked for errors), does not restrict your tempo choices, permits MIDI entry on any exercise, and turns MIDI local control on. In MD, Practice Mode is "Not Set for Mastery," does not restrict your tempo choices, permits you to hear the melody played by halves, permits you to play your own response (either whole or by halves) before you select CHECK ANSWER, always permits you to enter notation through a MIDI keyboard, and turns MIDI local control on. In both ISC and MD, you may decide whether the Practice Mode exercises will include C-clefs by choosing "Use C-Clefs Too" or "Don't Use C-Clefs" from the **Change** menu. In HD, Practice Mode is "Not Set for Mastery," does not require notation, always permits you to enter notation through a MIDI keyboard, and turns MIDI local control on. In all of these components, Practice Mode permits you to move freely among all the levels, and to select GO ON or EXIT at any time, even if you have not responded to the current Exercise Screen. From Practice Mode, you may return to Regular Mode at any time by choosing "Switch to Regular Mode" from the **Change** menu. Note that in Practice Mode, the program continues to keep track of your work as if you were working toward mastery, and messages will still appear so that you know exactly how well your practice is going. But remember, the work you do in Practice Mode does not count toward satisfying mastery requirements for Regular Mode, although you do get credit for the time you work and the number of exercises you attempt while working in Practice Mode.

Make My Own Drill (ISC only): If you would like to concentrate on specific pairs or groups of intervals, scales, or chords, click **Make My Own Drill** when you begin or choose "Make My Own Drill" and the appropriate submenu item from the **Change** menu. The computer will then allow you to set up your own drill. Use the checkboxes to indicate which choices will be included in your own personalized drill. You can turn checkboxes on and off by clicking in them. By marking the boxes, you select which items will be included; blank boxes indicate items that will not be included. In Intervals, you may choose to drill on a mix of ascending, descending, and harmonic intervals. In Scales, you may choose whether you want to enter the complete notation or add accidentals only (if you choose the "accidentals only" option, noteheads will be drawn on the staff for you). In Chords, you may choose whether exercises will be presented on a single staff or on a grand staff and how they will be played (arpeggiated, then blocked; blocked, then arpeggiated; or blocked only). Once you have made your choices, click the CONTINUE button, and the computer will give you exercises consisting only of the items you have selected. If you decide you would really rather not make your own drill and you have not yet clicked the CONTINUE button, click the GO BACK button to return to wherever you came from in the program. If you want to erase all the marks you have made in the checkboxes, click the CLEAR CHOICES button.

Written Drill (ISC only): If you would like to practice notating individual or specific groups of intervals, scales, or chords, click **Written Drill** when you begin or choose "Written Drill" and the appropriate submenu item from the **Change** menu. The computer will then allow you to set up your own drill, following the same procedure and selecting among the same options described in the paragraph immediately above (except that grand-staff chord exercises are not available in Written Drill). On each exercise screen, the identification for whatever you are asked to notate will appear beneath the staff. Because the object of this drill is to focus on improving your written skills, you cannot hear an exercise played until after you have entered your notation and had your answer checked.

Keyboard Drill (ISC only–MIDI keyboard required): If you would like to practice playing individual or specific groups of intervals, scales, or chords from a MIDI keyboard connected to the computer, click **Keyboard Drill** when you begin or choose "Keyboard Drill" and the appropriate submenu item from the **Change** menu. The computer will then allow you to set up your own drill, following the same procedure and selecting among the same options described in the Make My Own Drill section above (except that grand-staff chord exercises are not available in Keyboard Drill). The identification for whatever you are asked to play will appear beneath the staff. Because the object of this drill is to concentrate on improving your ability to play intervals, scales, and chords on a keyboard, you cannot hear the computer play an exercise until after you have entered your response through a MIDI keyboard and had your answer checked. For the same reason, you cannot change the notation with the mouse to correct an incorrect MIDI keyboard response in Keyboard Drill.

Your Statistics

How MacGAMUT maintains your statistics: Individual statistics are available only if you have your own individual MacGAMUT User Disk and your own personal startup.mgs file with its unique registration number (or if you've upgraded from your own ***MacGAMUT 3.8*** **User Disk**). If a MacGAMUT User Disk is shared by more than one person, no individual statistics will be kept.

As you work on MacGAMUT, the software automatically records your progress in the startup.mgs file you selected when you started the program. That file is updated periodically as you work on the program, so you don't need to do anything special to save your work statistics to your startup.mgs file.

How to check your statistics: If you have your own startup.mgs file, you may

select **Get Stats** when you begin or choose "Get Stats" from the **Change** menu in any Exercise Screen to see your current levels, mastery information (unless your instructor has changed the presets to "Not Set for Mastery"), the total number of exercises attempted, and the total time spent on each aural-training component and on Written and Keyboard drills. If your instructor has altered the ISC presets so that correct notation is not required for the aural-training exercises, "I.D. only" will appear by the name of the drill. Click SHOW DATES/TIMES to see a detailed accounting of how many minutes you spent on each component of the program each day. The date and time in this more detailed display is in the format "month/day: minutes." For example, "04/03: 26" indicates you spent a total of 26 minutes working on that program component on April 3. You may have actually worked in three separate sessions on that day, but separate uses of the same component on the same day are totaled in these listings. The computer keeps track of daily times only for the last 22 dates you worked on MacGAMUT. It continues to keep track of the total time you have worked, however, and the total time accumulated before the dated listings will appear at the beginning of your date and time list with a "generic" date of 00/00. Only the total time spent working on Written Drill and Keyboard Drill is given. The number of exercises attempted in these drills is not saved as part of your individual records. For Make My Own Drill in ISC and for Practice Mode in all program components, the time you have spent working and the number of exercises you attempted are added to the totals for the corresponding aural-training components.

The complete statistics record shows the total time you have spent on each part of the program from the first time you used MacGAMUT through the current date. However, if your instructor requires you to spend a minimum amount of time on MacGAMUT during a specific time period, you may want to check your stats for that period only. These "partial" stats are partial with respect to time and date information only; complete information about the levels mastered and the total number of exercises completed will always be given. In addition, recalculating, viewing, or saving this partial record of work does not in any way change your original records. If you want to see the information only for a specific time period: 1) click on the circle next to "time from"; 2) type the "from" and "through" dates in the next two blocks (type numbers for the month and day, separated by a slash); and 3) click RECALCULATE TIME.

How to stop the clock: The statistics clock keeps track only of the time you actually spend working on MacGAMUT, and does not count any time spent using other applications while MacGAMUT is open. Similarly, if you stop work on MacGAMUT for a period of time, the clock stops and does not restart until you resume work on the program.

Printing your statistics: To transform your statistics into a text file you can save and print, click the SAVE REPORT button. After you have quit work on MacGAMUT, you can open and print this "[your name] Report.txt" file using SimpleText *[Mac only]*, NotePad *[Windows only]*, or a word-processing program.

Sending statistics to your instructor: If your instructor wants to follow your progress on MacGAMUT, you may be asked to submit your statistics periodically. Your instructor may require you to submit your startup.mgs and/or your Report.txt file as e-mail attachments. If you have difficulty sending these files as e-mail attachments, please see the **Sending files as e-mail attachments** heading in the **Troubleshooting** section of this Guide or in the **Troubleshooting** file on your MacGAMUT CD-ROM.

Ending Your MacGAMUT Session

To quit MacGAMUT: You may quit by choosing *[Mac only]* "Quit" or *[Windows only]* "Exit" from the **File** menu of any Exercise Screen. You may also click the EXIT button in the lower-right corner of any Exercise Screen or type 'X' (upper-case 'X') and then click the QUIT button on the next window. From most of the program windows other than an Exercise Screen, you may leave by clicking the QUIT button on the screen. (*Note:* Unless your instructor has changed the Regular Mode presets to "Not Set for Mastery," you cannot leave the current Exercise Screen in a level you are attempting to master without first completing that exercise. In other words, once a new exercise is presented, you cannot quit working on the program without first having your answer checked.)

Backing up isn't hard to do: Each time you leave MacGAMUT, you will be prompted to make a back-up copy of your startup.mgs file. MacGAMUT even suggests a name for this back-up copy that includes the date and time the file was saved. It's a good idea to get in the habit of saving a back-up copy of your startup.mgs file somewhere other than where you keep your working file. Whether you're keeping your working startup.mgs file on your own computer hard drive, on a central server in a lab at school, on removable media (e.g., a floppy disk, Zip disk, or Jaz disk), or sending it to yourself as an e-mail attachment, you should be sure to save your back-up copy somewhere else. How often should you back up your file? That's up to you. But consider whether you would want to lose credit for the work you have done since you last saved a back-up file. Computers can malfunction, files can be deleted inadvertently, files sent over the internet can be mangled in transmission, and removable media disks can be misplaced or damaged. Think of the backup copy of your startup.mgs file as an insurance policy protecting you from possible catastrophic loss. You don't need to keep all the back-up copies forever, but

it's important to keep at least a couple of your most recent back-up files, just in case the unthinkable happens.

Don't leave the computer without it: Finally, unless you're using MacGAMUT only on your own computer, don't forget to remove your MacGAMUT CD-ROM from the drive and return it to its storage sleeve for safe-keeping. And, if you're transporting either or both of your working and back-up startup.mgs files on removable media disks, be sure to take the disks and your CD-ROM with you when you leave the computer.

Troubleshooting

If you don't find the solution to your problem here, check out the **FAQ's** (Frequently Asked Questions) on the MacGAMUT website at <www.macgamut.com> to see if the solution is there. You can also send an e-mail directly to <TechSupport@macgamut.com>. E-mailing TechSupport is the fastest way to get help. In your e-mail, please include the following information, and one of our tech support staff will usually reply to your e-mail within an hour:

Name (first and last)
Registration Number
Computer (Mac, Windows, or both) and operating system
School you attend and your instructor's name
Phone Number (with area code)
City and State
Best time to call in case e-mail doesn't solve the problem
And don't forget to explain exactly what the problem is, in as much detail as possible!

If you don't have e-mail access, you can call our business office at 1-800-305-8731 (toll-free from the U.S. and Canada) or 614-442-5876 (from other countries) during business hours (weekdays, 9 a.m. to 5 p.m. U.S. Eastern Time), and our office staff will relay your phone message to our tech support staff. If your call goes to our voice mail system, we will be able to help you faster if you leave the same information listed in the box above.

CD problems

- **Help! My CD isn't working any more. What can I do?**
  If your MacGAMUT CD-ROM becomes damaged in use, you can get a free replacement. *Do not* return a damaged MacGAMUT CD to the bookstore where you bought it. We've asked bookstores not to exchange new CDs for damaged ones. Simply e-mail the MacGAMUT business office at <office@macgamut.com>, requesting a replacement CD. If you don't have e-mail access, you can call our business office at 1-800-305-8731 (toll-free from the U.S. and Canada) or 614-442-5876 (from other countries) during business hours (weekdays, 9 a.m. to 5 p.m. U.S. Eastern Time) to request your replacement CD. Whether you contact us by e-mail or by phone, be sure to include your name and mailing address, and we'll get a replacement in the mail to you right away. Please retain your damaged CD until the replacement arrives, since we may ask you to return the damaged one for inspection. The replacement CD-ROM will not include a new

Registration Number, so be sure to keep your original Registration Number and your current startup.mgs file.

Startup.mgs file problems

• My startup file doesn't work. When I try to use it, MacGAMUT gives me a message saying my file isn't in the proper format for a startup file. What's wrong?

If you just sent the file as an e-mail attachment, the problem is probably the way you sent the file. See the first question under **Sending files as e-mail attachments** below. If e-mail attachments aren't involved, then the problem is more serious. If you have been using MacGAMUT for a while and this happens, hopefully you have a back-up copy of your file that you can use instead. If you just copied your startup file onto a floppy disk or have been keeping your startup file on a floppy disk, the problem is probably a disk error. (Hard disks are much more reliable for storing things you really care about.) The bottom line is that you need a new startup file if you don't have a back-up copy (see the next question).

If this is the first time you've tried to use your startup file after you registered, e-mail <TechSupport@macgamut.com> and tell us exactly what happened. In addition, include the exact name you originally registered under, your 9-digit Registration Number, and whether you are using a Mac, a Windows computer, or both. We'll get you up and running as soon as possible.

• I've lost my startup.mgs file, and MacGAMUT won't let me do anything without that file. How can I get another one?

It's too late to remind you that you should have been making regular back-ups of this all-important file and storing the back-up copy in a safe place, right?! You'll probably remember to make more regular back-ups in the future. But this time:

If you originally received your startup.mgs file after registering on the MacGAMUT website, you can get a replacement file from the same place. Just go to the **Register your software** section at <www.macgamut.com> and enter your name and registration number as you did the first time to get a replacement file delivered by e-mail. Sorry, but the new file will start you back at zero. If you've lost your Registration Number, e-mail <TechSupport@macgamut.com>. We can look up your number for you, but only if you can give us the exact name you originally registered under.

*If you upgraded from **MacGAMUT 3.8***, you can create a replacement startup.mgs file the same way you created your original startup.mgs file. See the MG38 Upgrade Info file for details. Once you have your replacement

startup.mgs file, store your old ***MacGAMUT 3.8*** disk in a safe place again, just in case you ever need *another* replacement file. Sorry, but the replacement file will start you back at wherever you were when you last used ***MacGAMUT 3.8***.

If you have given your instructor a copy of your startup.mgs file recently, you might ask your instructor if you could have a copy of that file so you wouldn't have to start all the way back at zero. The copy you've given your instructor is in exactly the same format as your working startup file, so it will work just fine.

• I have registered my software at <www.macgamut.com> and I'm 100% sure that I filled in the correct e-mail address. However, I have not yet received the Registration E-mail with my startup file attachment. How do I get my file?

When you register, your personal startup file is sent out automatically and immediately. It should arrive in a matter of seconds. How long it *actually* takes for you to receive the file is entirely a function of how your own internet service provider processes incoming e-mail. But even if your e-mail provider hangs on to your mail for a while before sending it on to you, it should be at most a matter of an hour or two before you receive your startup file. It's also possible that your startup file has already arrived, and you aren't looking for it in the right place. Many web-based e-mail services (e.g., yahoo and hotmail) have a screening process that filters out "junk" and "bulk" mail and saves it in a different inbox. Since the Registration E-mail is coming from the MacGAMUT server and not from a personal e-mail account, your e-mail provider may be assuming it's "junk" mail and then depositing it in the alternate inbox. If that is a possibility with your e-mail setup, check your "junk" mailbox first. If you still can't find your startup file, or if that's not the problem, please e-mail <TechSupport@macgamut.com> with your full name and Registration Number, and we'll send you your startup file from a personal account rather than from the server.

• Since "startup" is part of the name of the file, I assumed I could just double-click my startup.mgs file and *MacGAMUT 2000* would start right up. That seems to work fine on my Windows computer, but it doesn't always work on a Mac. Why not?

Install MacGAMUT 2000.03 or higher on your Mac. The latest update of MacGAMUT is available as a free download at <www.macgamut.com>, and make sure your startup file name ends with .mgs so that the Mac will be able to link your startup file with the MacGAMUT application. That should solve the problem, once and for all. If it doesn't, you can download a fix at

<www.macgamut.com/StartupFixerDL.html>. **Startup Fixer for Mac** can sometimes work magic when nothing else seems to help.

• When I double-click my startup.mgs file on my Windows computer, it tries to open some application other than *MacGAMUT 2000*. Is there some way to fix this so it starts MacGAMUT?

Either MacGAMUT hasn't been installed on this Windows computer (it's not enough just to have the MacGAMUT CD-ROM in your CD drive; you must run the installer program to install the software), or else some other program you have installed recently has wiped MacGAMUT's .mgs file association off the map. Install (or reinstall) MacGAMUT, and the installer program will set everything up properly so that MacGAMUT will start up when you double-click your startup.mgs file.

• I copied my working startup.mgs file from my hard drive onto a floppy [or Zip or Jaz] disk so I could take it to another computer to work on. But when I tried to use the startup.mgs file on the other computer, it wasn't the most recent version of my file. What gives?

You've run into one of the joys of trying to keep track of current file versions on either Mac or Windows computers. Computers are lazy, just like people, and they tend to wait as long as possible to update file information. MacGAMUT forces the computer to write a current copy of your startup.mgs file when you leave the program, but MacGAMUT can't do much about what the computer does after that. The only way to be absolutely sure "what you see is what you get" when you copy files on either Mac or Windows computers is to **close** the folder the file is stored in and then **reopen** the folder. That forces the computer to update the connection between the file as listed on the screen and the file as it's really stored on your computer. You can also use the "List" view on Mac or the "Details" view on Windows for easier access to complete information about when the file was most recently updated. But the easiest way to make sure you have the latest version is still just to **close** and then **reopen** the folder the file is stored in.

• I copied my startup.mgs file onto a Zip (or floppy or Jaz) disk, but when I put the disk in a different computer, the name was changed. Will the file still work?

Yes, it probably will, but it would be easier for you to keep track of if you change the name back to the original name! If you're working on a Windows computer, the .mgs may or may not show, depending on whether your computer is set up to show or hide file extensions, but the .mgs extension must be there so that Windows and MacGAMUT can recognize it as a startup.mgs file. In the old days (before the Windows operating system), DOS file names could be no longer than 8 characters with a 3-character extension (for example, THISFILE.XXX).

The altered name for your startup.mgs file is the computer's attempt to conform to this old name format, even though it's not necessary on Windows computers and never was necessary on Macs.

• Every time I start the program, it sets me back to zero. I mastered several levels the other day, but now it says I haven't mastered anything. Help!

Is it possible you've been working in Practice Mode? If you have credit for the time you have spent but don't have credit for the levels, that's probably what happened. Make sure Regular Mode is selected on the levels screen, *not* Practice Mode. Check the **MG Help/Help** menu for more info.

If all your stats are wiped out every time, and MacGAMUT says the last time you worked on the program was 00/00/00 or that it's a "new file," you're probably starting by double-clicking the attachment to the original e-mail that came with your startup file. Some Internet Service Providers give you a fresh copy of the attachment each time you open it. If you do a search for all files containing the word *startup* on your computer, you'll probably find multiple copies of the startup file. Locate the most recent startup.mgs file (or the one you've done the most work on), move that file to an easy place to find on your computer (e.g., to "My Documents" on a Windows computer or the MacGAMUT Folder on a Mac), and then always start from that file instead of from the attachment.

• Since I'm supposed to use the same startup.mgs file on Mac and on Windows computers, does that mean I need a PC-to-Mac or Mac-to-PC file conversion program?

No, you don't need a conversion program. In fact, if you try to use one on your startup.mgs file, it won't work any more. MacGAMUT saves you the hassle by handling all the conversions that need to be made. But remember that while Windows computers *cannot* read Mac-formatted disks, Macs *can* read Windows-formatted disks, so you should always use a PC-formatted disk whenever you are transporting your startup.mgs file by removable disk media (e.g., floppy, Zip, or Jaz disk). On a Macintosh, you even have the option of formatting a floppy disk as a PC disk.

Sending files as e-mail attachments

• I've tried attaching my startup.mgs file to an e-mail message to send it to another computer [or to my instructor], but it doesn't work when it gets to the other computer.

E-mailing files from one computer to another can often be problematic. Unfortunately, MacGAMUT files are no exception. The good news is that the

internet gremlins tend to leave certain kinds of files alone. The best way to send a file over the internet is to use compression software to create a .sit file ("stuffed") or a .zip file ("zipped") and attach it to an e-mail message. For information about software that lets you do that, check out <www.aladdinsys.com>. Then, of course, the person receiving the attachment will need to decode the file once it arrives. Aladdin Systems again comes to the rescue. You can download StuffIt Expander™ for Mac and StuffIt Expander™ for Windows FREE from <www.aladdinsys.com>. You don't even have to know what kind of computer will be on the receiving end because StuffIt Expander, whether for Mac or for Windows, can open both .sit and .zip files. If all else fails, you can try sending your files "straight up" with no compression, but don't count on the files coming through in good shape. If even stuffed and zipped files don't work, see the answer to the next question.

• OK, I've tried it stuffed [or zipped] and it still doesn't work to send it by e-mail. Now what?

If there's no way you can make attachments work, your best remaining option is to do it the old-fashioned way and transport the file on a removable media disk (e.g., floppy, Zip, or Jaz disk).

• I'm working on a Windows [or Mac] computer, but I know my teacher uses a Mac [or Windows] computer. If I send her my Report.txt file, will she be able to read it?

Yes, indeed. Both Windows NotePad and Macintosh SimpleText should be able to read the MacGAMUT Report.txt files created on either Mac or Windows computers. If there's a problem and all else fails, you should be able to use a word-processing program to open the Report.txt file, but it's unlikely that would be necessary. (In case you're wondering about the little square at the start of each line in the Mac Report.txt file, that's there because it contains info that Windows NotePad needs to read the Report.txt file!)

Sound problems

• I really hate the sound I'm getting from my MIDI keyboard when I use MacGAMUT. I've checked the instrument, and it's set for piano sound, so that's not the problem. What gives?

MacGAMUT is sending general-MIDI messages telling your MIDI keyboard that you want piano sound. The only problem is that your MIDI keyboard doesn't speak the same language if it's not general-MIDI-compatible. Turn General MIDI off in the **Sound** menu the next time you use MacGAMUT, and MacGAMUT will stop sending messages about instrumental timbre to your

MIDI keyboard. With many MIDI keyboards, turning the keyboard off and then back on resets it to the default timbre, which is usually piano sound. Or you can set whatever instrument you want on the MIDI keyboard itself, and you'll get the sounds you expect. (Check your MIDI synthesizer manual for instructions about setting the instrumental timbre directly on your synthesizer.) For more info, select "General MIDI" from the **MG Help/Help** menu on any Exercise Screen, or check the "General MIDI" section in the **User Guide**.

• Sometimes my MIDI keyboard seems to work fine, but other times it does strange things like playing intervals in the wrong direction or playing just plain awful sounds or not playing all the notes. What can I do?

MacGAMUT is designed to work with MIDI synthesizers that are set up "normally," but with all the bells, whistles, and buttons on synthesizers these days, it's sometimes difficult to understand how to reset a synthesizer to function normally. Start by selecting the simplest settings from within MacGAMUT. From the **Sound** menu, turn General MIDI off and set the MIDI Output Channel to "1 (all voices on 1)." Next, turn off the synthesizer, wait a moment, and turn it back on again. Then play a scale from one end of the keyboard to another to make sure you don't have split keyboard, multi, chordal accompaniment, or some other tricky setting turned on. (Check your MIDI synthesizer manual for more info about how to reset it to "normal.") If this still doesn't solve your problem, ask one of your techno-music buddies for help. It's a lot easier for someone who can take a close-up look at your specific MIDI synthesizer to solve the problem. All we can tell you is that MacGAMUT probably isn't what's causing your problem.

• I'm having trouble with sound, and it's ruining my chances for mastery. Help!

First, make sure you have installed the latest version of MacGAMUT (go to <www.macgamut.com>, then download *and install* the latest update). Also, it's best to work on solving your sound problems in Practice Mode, where it won't hurt if you get an exercise wrong because you can't hear the sound at all or don't like the sound you're hearing. Then look at the rest of the **Sound** questions and answers in this section and the **Sound FAQ's** in the **FAQ's** section of <www.macgamut.com> to see if your specific question is covered. Explore the menus, especially the **Sound** menu and the **Help** menu. If you're still having trouble, e-mail <TechSupport@macgamut.com> with as many details as possible. (Be sure to include all the info listed in the box at the beginning of the **Troubleshooting** section above. With sound problems, it's especially important to tell us whether you're working on a Mac or a Windows computer.)

• I'm not getting the "tick" sound for the metronome even though I've selected it in the "Hear Beats before Melody" submenu in the Tempo menu. What gives?

If you don't have General Midi turned on (check the setting in the **Sound** menu), or if your sound source is not General-MIDI-compatible, or if the Channel "1 (all voices on 1)" option is selected from the "MIDI Output Channel" submenu in the **Sound** Menu, you won't hear the tick. Choose "pitch" instead.

• I'm getting a strange pitch for the metronome even though I've selected "tick" in the "Hear Beats before Melody" submenu in the Tempo menu. Sometimes it's really confusing because the pitch is a half-step away from the beginning pitch or the tonic. Why is this happening?

If your sound source is not General-MIDI-compatible, it will misinterpret "tick" instructions and it may play a pitch that sounds wrong in the tonal context of the melody. The easiest way to solve the problem is to choose "pitch" instead of "tick," but you can also turn off General MIDI in the **Sound** menu. If the "pitch" option is selected or if General MIDI is turned off, the metronome should play pitches an octave or two above or below the beginning pitch of the melody.

• I sometimes hear the beats played before a melody and sometimes not. How can I fix this?

If you've selected "pitch" for the metronome from the "Hear Beats before Melody" submenu of the **Tempo** menu, keep in mind that the beats are played an octave or two lower or higher than the starting pitch of the melody. Depending on the instrumental timbre you have selected, it's possible the metronome pitch can't be heard in that range. Select a different instrument and see if that helps. (Piano always works.) If you've selected "tick" and you're not hearing the metronome beats, switch to "pitch."

• I'm using Windows sound, using the sound card in my computer, and I don't think the instrumental sounds are very realistic. Is there something I can do to improve the sound quality?

First check the MIDI Output Device in the **Sound** menu. Try the various choices and see if any of them sound better (you may not hear anything at all with some of them!). If that doesn't help, you might want to try using QuickTime sound (you can download and run the latest QuickTime installer from <www.apple.com/quicktime>). Although it seems like the sound should be the same since Windows sound and QuickTime sound both use the same sound card, the two sound choices may produce very different timbres. Try comparing the same sounds, switching back and forth between Windows sound and QuickTime sound, to see if you prefer one or the other. ***Caution:*** On some Windows computers, QuickTime may cause conflicts with other software

installed on your computer, and MacGAMUT or other programs may not work properly if QuickTime is installed. If you have unusual problems with MacGAMUT (e.g., if it won't even start up), uninstall QuickTime. It is not always easy to uninstall QuickTime, especially if different versions of it have been installed on the computer. If a simple uninstall doesn't solve the problem, search for all files with the word *quicktime* in the file name, and delete the files one at a time. Restart your computer and, chances are, MacGAMUT will now run properly.

• I'm using QuickTime sound, and I've changed the volume on the individual voices in Harmonic Dictation, but it doesn't seem to make much difference. What can I do?

You're probably using QuickTime 3. Download and run the latest QuickTime installer from <www.apple.com/quicktime>. With QuickTime 4 and higher, the voice ranges seem to be better balanced to start with, so you may not need to play with the sound volume. But if you do, the range of sound volume seems to be much larger with QuickTime 4 and higher, which makes it easier to bring out the voice or voices you're trying to emphasize.

• I'm working on a Mac, and I'm not getting any sound at all when I try to choose QuickTime sound.

If Opcode's OMS is installed on your Macintosh, make sure that you are using QuickTime 3.0 or higher (highlight QuickTime in the Extensions folder in the System Folder, and then choose "Get Info" from the **File** menu to see what version is installed). The QuickTime Music OMS Driver should be in the OMS Folder in your System Folder. In addition, the QuickTime music synthesizer should be selected in your QuickTime settings file (access QuickTime Settings through Control Panels under the Apple menu). If you have to change any of these System settings, you may need to restart your computer before the changes will take effect.

• I can't hear what I play on my MIDI keyboard some of the time when I'm working on MacGAMUT. Why not?

To make sure that you really are testing your "inner ear" and are not simply picking out the answer on a MIDI keyboard, matching pitches by trial and error, MacGAMUT attempts to turn MIDI local control off when you are working in Regular Mode. Not all MIDI keyboards accept local control messages, but if yours does, you will not be able to hear whatever you try to play on the MIDI keyboard. In Practice Mode, or after you have completed an example in Regular Mode, local control is turned on again so that you can play and hear whenever and whatever you want on the MIDI keyboard. Local control is always turned on when you are actually entering your responses through MIDI.

Mac, USB, and MIDI

• I have a new Mac that only has USB for hooking up MIDI. What do I do?

The easiest solution is to buy and install a Stealth Serial Port (<www.geethree.com/stealth.html>). You can then connect your MIDI equipment to your computer exactly the same way you always have. No new equipment (other than the Stealth card) to buy, and MIDI will continue to work as usual with no hassles.

But if you really want to or have to use USB for MIDI: Read the **Read Me USB MIDI** file that's installed along with everything else in your MacGAMUT folder.

General problems

• I can't access the Melodic and Harmonic Dictation libraries. The computer tells me I have to find them, but then either I can't find them, or else the computer can't read them when I do find them. Do I need new copies of the libraries?

There are several possibilities here:

If you can't find the libraries on your Windows computer, the default installation location for them is **C:\Program Files\MacGAMUT**. On a Macintosh, the default location is the **MacGAMUT Folder**.

If you're using MacGAMUT for a class, your instructor may be using different libraries. If the names of the libraries you're looking for are something other than MGMelodies and MGProgressions, then you'll need to get copies of the different libraries from your instructor and copy them onto your own computer.

Finally, in some cases, network administrators "lock" computers to prevent users from deleting or modifying files, and such administrative locks sometimes prevent access to Melodic and Harmonic Dictation libraries. We found a way to work around this problem in version 2000.04, so if you're not using the latest version of MacGAMUT, go to <www.macgamut.com>, then download and install the latest update (it's free!).

• I'm running Windows 2000, and nothing seems to work right in MacGAMUT. Isn't MacGAMUT supposed to be compatible with all Windows operating systems 95/NT and higher?

The problem here is Windows 2000, not MacGAMUT. Fortunately, downloading and installing the Service Pack 2 for Windows 2000 from <www.microsoft.com/windows2000/downloads/> should solve the problem. In fact, it will probably solve problems you didn't even realize you were having with other programs as well. As Microsoft says, "Windows 2000 SP2 is a well-tested

collection of updates that focuses on a variety of customer-reported concerns with the Windows 2000 operating system."

• On my computer, it seems to take a long time to show the series of pictures at the beginning. Is there any way to speed that up?

The computer is actually doing a fair amount of work while MacGAMUT tries to entertain you, but you can skip to the end of the show by either clicking the mouse or tapping any key on your computer keyboard. You can even use this trick to make the last screen disappear a little more quickly.

Using MacGAMUT

• I'm having trouble getting the notes and accidentals written on the staff on Mac.

Depending on your computer model and operating system, you may need to hold the mouse button just a bit longer than usual. Think of it as a slightly more *deliberate* click. If the problem is that you're having difficulty placing the accidentals on the correct line or space on the staff, try putting the note on first. Then, when you enter the accidental close to the right line or space, MacGAMUT will help you by "snapping" it where it's supposed to go. *Hint:* You may find it easier to work in Practice Mode while you get used to entering pitches or anything else that seems difficult at first. That way you can relax and not have to worry about your score while you practice using the software.

• I'm working on a Scales level that seems to require an accidental for every pitch. It's a pain to use the mouse to select each accidental again and again. Why isn't there an easier way?

You're in luck. There is an easier way. Check out the **Accidentals** submenu under **Keyboard Equivalents to Mouse Clicks** in the **MG Help/Help** menu, and while you're in the vicinity, you might want to check out the other submenus as well. Also, if you're interested in alternatives to other kinds of mouse clicks, take a look at the **Computer Keyboard Shortcuts to Screen Buttons** item in the **MG Help/Help** menu.

• Erasing Roman numerals seems harder than it used to be. Do I really have to click on the Erase box to get rid of a Roman numeral?

No, you don't. If you just don't like clicking on the Erase box, you can always type 'e' instead to turn it on and off. But the easiest way to get rid of a Roman numeral is to replace it with a different one. And there's yet another technique you can use to clear a Roman numeral you've already entered on the screen: first click CLEAR CHOICES, and then click on the Roman numeral you want to

erase. This method replaces whatever was in the box with a "blank" Roman numeral.

• Entering the notation in Melodic Dictation seems cumbersome. I have to click on each duration box and then go down and enter the note. When the durations change a lot from note to note, that's a pain.

Try using the numbers '1' through '7' and the '.' (period) to select the durations you want. You can select the duration with one hand and enter the pitches using the mouse with the other hand. You can also enter all the durations first (or second) by clicking on the note-entry-slot numbers above the staff. Of course, if you have a MIDI keyboard (and if your instructor hasn't altered the presets to prevent MIDI entry), you can play the melody in. Remember, you can play the pitches and durations either separately or at the same time when you use MIDI entry for Melodic Dictation.

• I'm trying to enter my notation for the Alto and Tenor voices in Harmonic Dictation (or 4-voice Chords), but MacGAMUT won't let me do it. Why not?

There are separate buttons to select the Soprano and Alto voices in the treble clef, just as there are separate buttons for Tenor and Bass voices in the bass clef. Chances are that all you need to do is click the "A" and "T" buttons to solve the problem. Check out **Entering Pitches** in the **MG Help/Help** menu.

• I was working on MacGAMUT, and the program wouldn't let me quit. There was no Exit button on the screen, and Quit (Mac) or Exit (Windows) was dimmed in the File menu. Other than pulling the plug, how am I supposed to stop working on the program?

There's actually a very good pedagogical reason why you couldn't quit or go on to the next exercise. Whenever you are working toward Mastery in Regular Mode, you must complete your answer to the current exercise before you can leave the program or switch to a different kind of exercise. As soon as you have your answer checked the first time, the EXIT button will reappear, and the Exit (or Quit) option in the **File** menu will be fully operational. The problem is that, when permitted to quit (or to go on to the next exercise) at any time, students often choose to bypass exercises that are harder than they want to attempt. So having the option of quitting or going on at any point is not unlike allowing students to ignore any test questions they think are too difficult. In Practice Mode, the EXIT and GO ON buttons are always operational, as is the Exit (or Quit) option in the **File** menu.

• I had 7 out of 10 right and got the next one right, and I *still* had only 7 out of 10 right. This happens to me all the time, and it's just not fair. Why

won't MacGAMUT let me get mastery when I only need to get one more right and I *do* get it right?

The problem is that you have to get 8 out of the *last* 10 exercises correct in order to achieve mastery. It's not just any set of 10 exercises. It has to be the *last* 10. There's actually a graphic display of your progress in the row of boxes at the bottom of the MacGAMUT exercise screen. As you complete each exercise, a green box (for a right answer) or a red X (for a wrong answer) shows up in the box that is furthest to the right. If all ten boxes are full (as they would be if you had 7 out of 10 correct), the red Xs and green boxes all get shoved over one box to the left to make room for the new answer. That means the red X or green box that was furthest to the left gets shoved off and forgotten because it's no longer one of the *last* 10 exercises you have completed. If that box happened to be green (i.e., if you got that exercise right), and you just added a new green box on the right, your score won't change. You still have only 7 of the *last* 10 exercises correct. Your score will go up if a red X drops off the left when you get an exercise correct, which means your goal is to make enough of those red Xs drop off the left so that you can achieve mastery. I know it's frustrating to be that close and still not achieve mastery when you get one right, but watching your progress in the boxes should help you understand what's going on.

• MacGAMUT graded one of my Melodic Dictation exercises wrong. I'm not really complaining because my score was higher than it should have been, but it counted several notes right even though those notes were different from the notes in the same position in the correct melody. Have I found a bug?

Probably not, although we certainly appreciate your honesty. MacGAMUT is probably doing exactly what it's supposed to do. The problem may be that MacGAMUT is more intelligent than you expect! It tries to grade your Melodic Dictation exercises the same way a teacher would, giving you credit for whatever is correct in the melody, even if you leave out a note or two, or add one or two extra notes. That means that the program is comparing the correct note not only with the note you have entered in the corresponding note-entry slot, but with other nearby notes as well. It's possible that MacGAMUT made a mistake, just as a teacher might, in trying to give you all the credit you deserve. But the next time something like this happens, see if what look to be "wrong" notes of your melody match up with nearby notes in the correct melody. Chances are, you'll find that the "wrong" notes really shouldn't have been counted wrong, and that your melody is closer to the correct version than you had realized. Of course, grading Melodic Dictation is a pretty tricky thing to do for both computers and humans, so if you are convinced MacGAMUT has made a serious mistake, please contact <TechSupport@macgamut.com> with all the gory details. (Be sure to

include all the info listed in the box at the beginning of the **Troubleshooting** section above.)

• I hate to mention it, but I'm sure MacGAMUT graded something wrong. I got the identification right, but my notation was wrong, and I still got full credit for the exercise.

Thanks for your honesty, but MacGAMUT probably did exactly what it's supposed to do. Whenever you're not required to enter notation, MacGAMUT will still mark your notation, but it won't count as part of your grade since it wasn't required.

Bug reporting

We take bug reports very seriously. If you find a real live bug in MacGAMUT and you're the first to report it and help us track it down, we'll reward you with a very spiffy ***MacGAMUT 2000*** t-shirt! Be the first in your school to have one! If you think you've found a bug, send an e-mail to <TechSupport@macgamut.com>, including as many details as you can about exactly what happened, since it's almost impossible to fix a bug we cannot duplicate. Please include all the info listed in the box at the beginning of the **Troubleshooting** section above. Don't forget to mention whether you were working on a Mac or a Windows computer. Also, be sure to describe what you were working on, what level, what you had been working on just before the bug appeared, how long you had been working, etc. It's difficult to guess what details might be important, so the more information you send, the better. If you found the bug in the MD or HD components, and there's any possibility the bug is specific to the exercise you were working on, please copy down the melody or harmonic progression. If you're working on a Mac, the fastest way to save this information is to take a snapshot of the screen (hold down the command and shift keys and type the number 3). You can then attach the screen shot to your e-mail message. We do our best to find and fix any and all bugs before we send MacGAMUT software out to the world, but every now and then, something still slips by. The sooner you tell us, the sooner the problem will be fixed. Thanks for your help!